Recombinant human Replication protein A 32 kDa subunit

Catalog No: #AP71726

Package Size: #AP71726-1 20ug #AP71726-2 100ug #AP71726-3 1mg

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

Description

Product Name	Recombinant human Replication protein A 32 kDa subunit
Brief Description	Recombinant Protein
Host Species	E.coli
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:1-267aaSequence Info:Partial
Other Names	Replication factor A protein 2 ;RF-A protein 2Replication protein A 34KDA subunit ;RP-A p34
Accession No.	P15927
Uniprot	P15927
GeneID	6118;
Calculated MW	55.9 kDa
Tag Info	N-terminal GST-tagged
Target Sequence	MWNSGFESYGSSSYGGAGGYTQSPGGFGSPAPSQAEKKSRARAQHIVPCTISQLLSATLVDEVFRIGNVEIS QVTIVGIIRHAEKAPTNIVYKIDDMTAAPMDVRQWVDTDDTSSENTVVPPETYVKVAGHLRSFQNKKSLVAFKI MPLEDMNEFTTHILEVINAHMVLSKANSQPSAGRAPISNPGMSEAGNFGGNSFMPANGLTVAQNQVLNLIKAC PRPEGLNFQDLKNQLKHMSVSSIKQAVDFLSNEGHIYSTVDDDHFKST
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Background

As part of the heterotrimeric replication protein A complex (RPA,RP-A), binds and stabilizes single-stranded DNA intermediates, that form during DNA replication or upon DNA stress. It prevents their reannealing and in parallel, recruits and activates different proteins and complexes involved in DNA metabolism. Thereby, it plays an essential role both in DNA replication and the cellular response to DNA damage. In the cellular response to DNA damage, the RPA complex controls DNA repair and DNA damage checkpoint activation. Through recruitment of ATRIP activates the ATR kinase a master regulator of the DNA damage response. It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin in response to DNA damage. Also recruits to sites of DNA damage proteins like XPA and XPG that are involved in nucleotide excision repair and is required for this mechanism of DNA repair. Plays also a role in base excision repair (BER) probably through interaction with UNG. Through RFWD3 may activate CHEK1 and play a role in replication checkpoint control. Also recruits SMARCAL1,HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance

References

The ionizing radiation-induced replication protein A phosphorylation response differs between ataxia telangiectasia and normal human cells.Liu V.F., Weaver D.T.Mol. Cell. Biol. 13:7222-7231(1993)Research Topic:Epigenetics and Nuclear Signaling

Note: This product is for in vitro research use only